



ABSTRACT

[Abstract of the Disclosure]

A solution used for chemical mechanical polishing (CMP) of a copper metal interconnection layer and a method of manufacturing a copper metal interconnection layer using the solution are provided. The CMP solution includes an oxidizing agent, a pH controlling agent, a chelate reagent, and deionized water. That is, the CMP solution does not include an abrasive. The method of manufacturing a copper metal interconnection layer using the solution includes: forming a recessed region having a predetermined interconnection form in an interdielectric layer; forming a barrier layer along a stepped portion over the entire surface of the interdielectric layer having the recessed region; forming a copper seed layer on the barrier layer; and exposing the barrier layer by CMP using the solution until a surface of the interdielectric layer is exposed so that the copper seed layer remains only within the recessed region.

[Representative Drawing]

FIG. 3